

Amendments to the Claims:

1. (Currently Amended- Check all status indicators)

A system that facilitates utilizing an optical medium, the system comprising at least one processor ~~programmed to, the system configured to:~~

provide concurrent recordation reading of a plurality of data streams from the optical medium to a corresponding one of a plurality of buffers, the plurality of data streams comprising at least one real-time data stream;

analyze at least one of the plurality of data streams;

infer potential starvation of a first real-time data stream of the at least one real-time data stream; and

based on the inference of potential starvation, take remedial action to mitigate the inferred starvation of the first real-time data stream.

~~and playback of data from the optical medium,~~

~~the playback starting at time (t_x) and the recordation starting at time (t_y), wherein $t_x \neq t_y$.~~

2-9. (Canceled)

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10. (Currently Amended)

The system of claim 9, further comprising:

wherein ~~the~~ at least one buffer of the plurality of buffers corresponding to the first real-time data stream has a minimum buffer capacity that is a function of read speed and at least two seek times, the at least two seek times comprising a time to seek to a location logically forward on the disc, and a time to seek to a location logically backward on the disc. ~~one seek time.~~

11. (Previously Presented)

The system of claim 1, further comprising a buffer controller that controls creation and/or use of at least one buffer of the plurality .

12. (Currently Amended)

The system of claim ~~[[11]]~~ 1, wherein ~~the buffer controller system~~ is further configured to perform~~[[s]]~~ a utility-based analysis in connection with buffer access.

13. (Previously Presented)

The system of claim 12, wherein the utility-based analysis is based at least in part on a probabilistic-based determination of cost associated with saving data to the at least one buffer.

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14. (Previously Presented)

The system of claim 12, wherein the utility-based analysis is based at least in part on a probabilistic-based determination of cost associated with retrieving data from the at least one buffer.

15. (Previously Presented)

The system of claim 1, wherein the optical medium has a guaranteed minimum data transfer rate.

16. (Previously Presented)

The system of claim 15, wherein the guaranteed minimum data transfer rate is at least about 176 kilobytes per second.

17. (Currently Amended)

The system of claim 1, wherein the plurality of data streams comprises a plurality of real-time data streams, the system further configured to at least one processor is further programmed to provide concurrent playback of [[a]] the plurality of real-time data streams from the optical medium.

18. (Currently Amended)

The system of claim 17, at least two of the plurality of real-time data streams corresponding to a CD audio track. ~~the data streams comprising audio data.~~

19. (Canceled)

20. (Currently Amended)

The system of claim 1, further comprising a continuity component, the continuity component configured to facilitate ~~wherein the at least one processor is further programmed to provide~~ concurrent recordation of a plurality of data streams in parallel from the optical medium.

21. (Canceled)

22. (Currently Amended)

The system of claim 20, wherein the remedial action comprises ~~at least one processor is further programmed to analyze a subset of the data streams and dynamically ordering~~ reading of ~~respective~~ the data stream[[s]] ~~of the subset to mitigate stream break-up.~~

23. (Canceled)

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24. (Currently Amended)

The system of claim 23, wherein the ~~at least one processor is further programmed to~~
~~prognose~~ inferring potential starvation comprises using a probabilistic-based utility
analysis.

25. (Currently Amended)

A method of utilizing optical media, the method comprising:

~~initiating a first operation comprising reading~~ starting to read a first data stream
~~data from the optical media at time t_x , the first data stream a real-time data stream; and~~

~~initiating at least a second operation comprising reading~~ starting to read a
second data stream data from the optical media concurrently with the first data stream
at time t_y ($t_x \neq t_y$), while the first data stream is being read ~~operation is currently in~~
~~progress, wherein $t_x \neq t_y$; and~~

transferring the first data stream to a first buffer for temporary storage at a
sufficient rate to allow transfer of the second data stream without causing starvation of
the first data stream.

26-31. (Canceled)

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32. (Currently Amended)

The method of claim [[31]] 25, further comprising determining read performance across the optical media to facilitate ascertaining [[the]] an optical hardware device's ability to read the optical media, the optical hardware device employed to run the optical media, the determining read performance across the optical media comprising:

reading at least a first amount of data from a first position on the optical media such that an internal media cache of the optical hardware device is not concurrently caching the first amount of data when the reading of the first amount of data starts;

reading at least a second amount of data from a second position on the optical media, wherein the second position is separated from the first position by data representing an increment of playback time that is sufficient for determining characteristic read performances across the optical media; and

reading data from other positions on the optical media to determine read performances across substantially all of the optical media.

33. (Previously Presented)

The method of claim 32, the first amount of data being about 8 megabytes.

34. (Previously Presented)

The method of claim 32, the increment of playback time being about 5 minutes.

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35. (Previously Presented)

The method of claim 32, wherein the second amount of data is substantially equal in size to the first amount of data.

36. (Previously Presented)

The method of claim 32, wherein the first amount of data is determined based at least in part upon an internal buffer size of the optical hardware device.

37. (Currently Amended)

The method of claim [[31]] 25, further comprising determining seek times across the optical media to facilitate ascertaining ~~[[the]]~~ an optical hardware device's ability to seek on the optical media, the optical hardware device employed to run the optical media, the determining seek times comprising:

dividing the optical media into a number of sections, the number of sections comprising at least a first section and at least a second section, such that an internal cache of the optical hardware device does not pre-cache data from the second section when told to start reading from the first section; and

for all ordered pairs of sections comprising any two sections, ensuring that the optical hardware device is reading from the first section and then causing the optical hardware device to seek to the second section to gain characteristic seek performances across the optical media.

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38. (Original)

The method of claim 37, wherein all sections are of substantially equal size.

39. (Previously Presented)

The method of claim 37, wherein a size of the sections is determined based at least in part upon an internal buffer size of the optical hardware device.

40. (Previously Presented)

The method of claim 37, wherein ensuring that the optical hardware device is reading from the first section comprises reading an amount of data larger than an internal buffer size of the optical hardware device from a section other than the first and second sections.

41. (Previously Presented)

The method of claim 37, wherein ensuring that the optical hardware device is reading from the first section comprises sending a READ10 command with a force unit access (FUA) bit set to one.

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42. (Previously Presented)

The method of claim 37, wherein causing the optical hardware device to seek to the second section comprises using a READ10 command with a force unit access (FUA) bit set to one.

43. (Previously Presented)

The method of claim 37, wherein causing the optical hardware device to seek to the second section comprises using a SEEK command.

44. (Previously Presented)

The method of claim 37, wherein a size of the sections is about 5 minutes.

45. (Previously Presented)

The method of claim 37, wherein ensuring that the optical hardware device is reading from the second section comprises reading an amount of data larger than an internal buffer size of the optical hardware device from the first section.

46. (Currently Amended)

The method of claim [[31]] 25, further comprising determining whether minimum buffer requirements are satisfied, the minimum buffer requirements being a function of read speed and seek times.

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47-50. (Canceled)

51. (Previously Presented)

At least one computer-readable storage medium having stored thereon the following computer executable components:

a component that provides for concurrently reading a non-real-time data stream from optical media starting at time t_y and reading a real-time data stream from the optical media starting at time t_x , wherein $t_x \neq t_y$.

52. (Canceled)

53. (Currently Amended)

The system of claim 1, wherein the system is further configured to:

perform a utility-based analysis in connection with the concurrent reading.

~~A recording system, comprising at least one processor programmed to:~~

~~provide concurrent recordation of and playback of respective media from an optical medium, the playback starting at time (t_x) and the recordation starting at time (t_y), wherein $t_x \neq t_y$; and~~

~~perform a utility-based analysis in connection with the recordation and playback.~~

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54. (Currently Amended)

The system of claim 53, wherein the utility-based analysis uses a classifier.

~~the at least one processor is programmed to perform the utility-based analysis using a classifier.~~

55. (Currently Amended)

The system of claim 53, wherein the system is further configured to at least one
~~processor is programmed to perform the utility-based analysis by inferring when to~~
initiate recordation.

56-58. (Canceled)

59. (New)

The system of claim 53, wherein the system is further configured to perform the
utility-based analysis using at least one data fusion engine.

60. (New)

The system of claim 53, wherein the system is further configured to perform the
utility-based analysis using at least one support vector machine (SVM).

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61. (New)

The system of claim 53, wherein the system is further configured to perform the utility-based analysis using at least one naïve Bayes model.

62. (New)

The system of claim 53, wherein the system is further configured to perform the utility-based analysis using at least one Bayesian network.

63. (New)

The system of claim 53, wherein the system is further configured to perform the utility-based analysis using at least one Hidden Markov Model (HMM).

64. (New)

The system of claim 53, wherein the system is further configured to perform the utility-based analysis using at least one neural network.

65. (New)

The system of claim 1, the system further comprising an optical media drive operatively coupled to read the optical medium, the system further configured to:

determine a first plurality of seek times, each of the first plurality of seek times based on a seek from an earlier location on optical media to a later location on optical media;

determine a second plurality of seek times, each of the second plurality of seek times based on a seek from an later location on optical media to an earlier location on optical media, the first and second plurality of seek times collectively referred to as the combined seek times,

wherein the inference is based on at least a first seek time of the first plurality of seek times and at least a second seek time of the second plurality of seek times.

66. (New)

The system of claim 65, wherein the determining at least a first of the combined seek times comprises:

causing the drive to seek from a first location on the optical media to a second position on the optical media.

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67. (New)

The system of claim 66, wherein the causing the drive to seek from a first location on the optical media to a second location on the optical media comprises:

reading at least a first amount of data from the first location on the optical media such that an internal media cache of the optical hardware device is not caching data from the second location on the optical media;

reading at least a second amount of data from the second location on the optical media.

68. (New)

The system of claim 66, wherein the causing the drive to seek from a first location on the optical media to a second location on the optical media comprises:

sending a read command with a force unit access (FUA) bit set to one to the drive.

69. (New)

The system of claim 66, wherein the causing the drive to seek from a first location on the optical media to a second location on the optical media comprises:

sending a SEEK command to the drive.

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70. (New)

The system of claim 1, wherein:

the plurality of data streams comprises a plurality of data streams corresponding to CD audio tracks,

a first CD audio track stream of the plurality of audio track streams is a real-time data stream,

reading of the first CD audio track stream started at time t_x ,

reading of a second CD audio track stream of the plurality of CD audio track streams started at time t_y , where $t_x \neq t_y$, and

the reading of the later of the first or second CD audio track streams does not interrupt the reading of the earlier of the first or second CD audio track streams.

71. (New)

The system of claim 70, wherein the second audio track stream is a real-time data stream.

72. (New)

At least one computer-readable storage medium having stored thereon computer executable instructions, the computer executable instructions that, when executed by a computer system, cause the computer system to perform the method of claim 25.

73. (New)

At least one computer-readable storage medium having stored thereon computer executable instructions, the computer executable instructions that, when executed by a computer system, cause the computer system to perform the method of claim 32.

74. (New)

At least one computer-readable storage medium having stored thereon computer executable instructions, the computer executable instructions that, when executed by a computer system, cause the computer system to perform the method of claim 37.

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